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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/303,554	05/03/1999	JONG SUN HAN	K-087	8522

7590

08/28/2002

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EXAMINER

ABELSON, RONALD B

ART UNIT

PAPER NUMBER

2663

DATE MAILED: 08/28/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/303,554

Applicant(s)

HAN, JONG SUN

Examiner

Ronald Abelson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 May 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 May 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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*Drawings*

1. Figures 1 and 3 should be designated by a legend such as -- Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

*Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claim 1 rejected under 35 U.S.C. 102(a) as being anticipated by the applicant's admitted prior art.

The applicant's admitted prior art a method and apparatus for controlling call access of a terminal in a communication system (figs. 1 and 3). The system comprises the steps of broadcasting at a base station at least two or more call access control information signals to a plurality of mobile stations

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(fig. 3, pilot channel, sync channel, pg. 1 line 20 - pg. 2 line 9) and receiving at the corresponding mobile stations and performing call access request at the base station depending on the call access control information (pg. 2 line 20 - pg. 4 line 3).

4. Claims 2, 3, and 5 - 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted prior art in view of Adachi (US 6,084,884).

Regarding claim 10, although the applicant's admitted prior art does not specifically teach a base station broadcasting interference information, the value of the idle bit that is broadcast by the base station is a function of interference (pg. 3 line 6 - 21).

The applicant's admitted prior fails to variable length Walsh codes.

Adachi teaches the implementation of multiple transmission rates in a CDMA environment in order to reduce interference (col. 1 lines 25 - 47). Specifically, Adachi teaches Walsh codes where the difference in the length of any two Walsh codes is of the order  $2^n$  where  $n$  is an integer and greater than or equal to zero (figs 2,3, col. 3 line 57 - col. 4 line 10).

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Therefore it would have been obvious to one of ordinary skill in the art, having both the applicant's admitted prior art and Adachi before him/her and with the teachings [a] as shown by the applicant's admitted prior art, a method and apparatus for controlling call access of a terminal in a communication system, and [b] as shown by Adachi, transmitting orthogonal Walsh codes of variable lengths in a CDMA environment, to be motivated to modify the system of the applicant's admitted prior art by transmitting variable length Walsh codes as described in the algorithm of Adachi. This algorithm can be implemented in software. This would improve the system by allowing different users to transmit at different data rates. For example it is desirable to transmit data at a higher rate than voice.

Regarding claim 2, in addition to the limitations listed in claim 10, the combination of the applicant's admitted prior and Adachi teaches information of at least one or more code classes in which Walsh codes are assigned (spec: pg. 2 line 20 - pg. 3 line 21) and the length of the Walsh code is proportional to the transmission rate (Adachi: col. 1 lines 63 - 65).

Regarding claim 3, comparing overall received power from a plurality of mobile stations in the cell or sector of the base station with a predefined threshold value (spec: col. 2 line 20-col. 3 line 5), and then indicating whether a current reverse

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channel is idle or busy (spec: col. 2 line 20- col. 3 line 5).

The applicant states the invention "selectively" indicates whether a current reverse channel is idle or busy. By "selectively", the applicant's algorithm first checks to see if the interference does not exceed the threshold value. Then the status of the Walsh code for each code length is checked. If the status for a given code length is idle then a value indicating the reverse channel is idle. If the status for a given code length is busy then a value indicating the reverse channel is busy. (See spec: pg. 10 line 20 - pg. 11 line 5). The applicant is merely stating the obvious. If all the codes for a given class are used, then a bit value indicating the class is busy is transmitted. If all the codes for a given class are not used, then a bit value indicating the class is idle is transmitted only if the power level is below a predefined threshold.

Regarding claim 5, it is obvious that code classes have relative priority orders since the length of the code is proportional to the data rate (Adachi: col. 1 lines 63 - 65).

Regarding claims 6-7, the call access information is transmitted through a broadcasting channel per super frame period and through a paging channel per slot cycle period. This

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conforms to the ITU-R standard (spec: pg. 9 line 20 - pg. 10 line 7).

Regarding claims 8 and 9, it would be obvious to assign the mobile station a code class having the highest priority. The highest quality of service is always preferable. In addition it would be obvious to assign the mobile a code from a code class that is idle as opposed to one from a code class that is busy.

5. Claims 4, 11 - 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of the applicant's admitted prior and Adachi in view of Hodzic (US 6,097,707).

Regarding claims 4, and 11 - 13, in addition to the limitations listed in claims 1 and 10, the combination of the applicant's admitted prior and Adachi teaches a link busy/idle field indicating whether or not interference the interference transmitted to a mobile terminal from a base station exceeds a preset threshold value (spec: pg. 3 lines 6 - 22).

Regarding keeping track of which Walsh code classes are available, Adachi teaches a method of successively choosing Walsh codes for a given class (col. 2 lines 20-22).

Hodzic teaches in a CDMA environment keeping track of the codes that are currently in view by way of a code table (col. 11 line 62 - col. 12 line 12).

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Given a method exists for keeping track of available Walsh codes, the step of determining whether or not the complete set of Walsh codes for a given code length is currently in use is trivial. A busy/idle field could be used to transmit information on the availability of Walsh codes in a given class.

Therefore it would have been obvious to one of ordinary skill in the art, having both the combination of the applicant's admitted prior art and Adachi and Hodzic before him/her and with the teachings [a] as shown by the combination of the applicant's admitted prior art and Adachi, a method and apparatus for controlling call access of a terminal in a communication system using variable length codes, and [b] as shown by the Hodzic, a method of keeping track of which codes are currently in use, to be motivated to modify the system of the combination of the applicant's admitted prior art and Adachi by using a code table to keep track of the codes that are currently in use. This modification can be performed in software. This would improve the system by incorporating a reliable method assigning Walsh codes. Without a mechanism for knowing which codes were currently in use, the base station could assign two or more mobiles the same code.



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Regarding claim 14, it is obvious that code classes have relative priority orders since the length of the code is proportional to the data rate (Adachi: col. 1 lines 63 - 65).

**Conclusion**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (703) 306-5622. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (703) 308-5340. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

*RA*  
Ronald Abelson  
Examiner  
Art Unit 2663

*RA*

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July 19, 2002



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